Great People

"Computer scientists at LLNL are simply world-class, collaborating daily with physicists and engineers to successfully exploit the world's largest and fastest massively parallel machines. Their expertise is unmatched in parallel code development, algorithm improvement, and innovative visualization of petascale data sets. Livermore's utracomputing infrastructure truly powers our breakthrough research."

Charles McMillan, B Division/Program Leader

The Laboratory relies on an exceptional staff of talented and dedicated scientists, engineers, technicians, specialists, craftspeople of every type, and administrative employees. LLNL attracts a world-class workforce and builds innovative academic and industrial collaborations, bringing together the best individuals in every field.

The Computation Directorate offers interesting and challenging work in many different areas of computer science, allowing an employee to gain a wide range of experience without ever leaving the Lab. *Many employees spend most of their careers at LLNL.*

LLNL Computation hires include computer scientists, mathematicians, applications designers, and network analysts. Five such individuals are pictured above. Standing, left to right, are Hank Childs, who is matrixed to the Defense and Nuclear Technologies Computing Applications Division; Marisa Lam, in the Energy, Environment, Biology & Institutional Computing Division; Ephraim Tekle, matrixed to the National Ignition Facility and Engineering team; and Jennifer Aquilino, of Computer Systems Support. Vic Castillo, foreground, is matrixed to the Engineering Directorate. On the reverse side, read their insights about working at LLNL.

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http://www.llnl.gov/comp/opportunities/

Work performed under the auspices of the U.S. Department of Energy by the University of California, Lawrence Livermore National Laboratory, under Contract No. W-7405-ENG-48. UCRL –MI-207898-06

Career Insights from Five Computer Scientists

The five employees pictured on the front page represent a small cross-section of Computation's workforce. Here is what they have to say about working at LLNL.

Hank Childs

In 1999, Hank received a BS from UC Davis with a double major in Math and Computer Science. "The biggest reason I took a job at LLNL was the excellent graduate school program the Lab provides. I am a PhD student at UC Davis, specializing in scientific visualization."

"During my time at LLNL, I have found my job assignment to be very stimulating. I work on VisIt (http://www.llnl.gov/visit), a parallelized visualization tool used to interactively analyze very large (more than 10 billion elements) and complex simulations. I am excited by working on some of the world's largest supercomputers and writing software that is used by hundreds, yet contains many research elements."

(VisIt was recently recognized as an R&D 100 winner by R&D Magazine as one of the most innovative products of 2005. As part of the VisIt team, Hank is a recipient of this prestigious award.)

Marisa Lam

In 2002, Marisa earned degrees from UC Berkeley in both Biology and Computer Science. She had been a software developer for the Chemical and Biological National Security Program at LLNL as a student for two summers, and has now been full-time for three years. She uses LLNL educational resources to advance her knowledge of computational protein analysis and algorithmic design.

"Our group created a fully automated DNA-based signature pipeline to detect unique regions of bacterial and viral pathogens. Signatures from the pipeline are used in national public health and in homeland defense. Sequencing quality and significance have been assessed using the signature pipeline, and the analysis has influenced microbial genome sequencing decisions."

"I enjoy brainstorming with a dynamic interdisciplinary team that really shines around the whiteboard. I am excited about our contributions to biodefense, especially when I hear on the news about an emerging pathogen our signatures helped to detect."

Ephraim Tekle

Ephraim emigrated from Ethiopia in May 1995, and began at MIT as an undergraduate in 1998. Five years later, he graduated from MIT with a Masters of Science in Physics and a Masters of Engineering in Information Technology. In June 2003, the month he graduated, Ephraim joined the Lab.

"My work in Computation supports the National Ignition Facility project. NIF sports the largest and most powerful laser system in the world. With some 60,000 control points, NIF pushes the boundaries of a distributed computer control system."

"From its potential for our national security and solving the world's energy crisis, to expanding our horizons in laser technology, astrophysics and atomic physics, NIF is an era-defining, inspiring and intellectually stimulating project. I enjoy a deep sense of accomplishment and satisfaction from contributing to our nation's boldest scientific endeavor."

Jenny Aquilino

Jenny began at the Lab as a summer student in 1995, while still in high school. She continued to go to school and work throughout high school, junior college and the University of California, Davis, where she earned a B.S. in computer science. In 2002, two weeks after graduation, Jenny was offered a computer scientist position.

"I am now a technical lead supporting the Unix computing environment, in the group that originally brought me in as a student nearly ten years ago. I am also working on projects that have Lab-wide impact, which makes them challenging and exciting."

"Every day brings new problems to solve, challenging me to look beyond my current skills and experience to find a solution. I receive full support in implementing many of those solutions. Knowing that I actually make a difference is what makes working at the Lab so fulfilling."

Vic Castillo

Vic started at the Lab in the summer of 1994 as a Student-Employee Fellow and finished his Ph.D. in Applied Science Engineering from the University of California, at Davis, in 1999. He was then hired as a permanent employee in the Computation Directorate. He is now a computer scientist, matrixed to the Engineering Directorate where he develops high-performance codes for engineering analysts. He is the developer of a hypersonic flow code that works within a multi-mechanics framework for parallel computing environments.

"The Lab's Student-Employee Fellowship provided me with a unique opportunity to pursue my Ph.D. in an environment of great scientists and great resources. After graduating, I was able to work in the Methods Development Group, where cutting-edge engineering software has been developed since the 1970's. I have been given great freedom to direct my own work and am now developing computational fluid dynamics capabilities for a group that has traditionally focused on solid mechanics."